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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/884,274	06/19/2001	Toshifumi Oida	36856.517	1664

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EXAMINER

KNOWLIN, THUAN P

ART UNIT

PAPER NUMBER

2614

DATE MAILED: 06/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/884,274	Applicant(s) OIDA ET AL.	
	Examiner Thjuan P. Knowlin	Art Unit 2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>03/29/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicant's amendment filed on March 28, 2006 has been entered. Claim 8 has been amended. Claims 5 and 11-24 have been cancelled. No claims have been added. Claims 1-4 and 6-10 are still pending in this application, with claim 1 being independent.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4 and 6-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Yoshihara et al (US 5,898,909).
3. In regards to claims 1, 6, and 9, Yoshihara discloses an RF module (See Fig. 8-9B, radio communication module 10 and Fig. 25, radio communication module 57) comprising: a multi-layered substrate (See Fig. 25, substrate 14 N and col. 14-15 lines 66-1); a base-band IC (See Fig. 18 and semiconductor chip 11a), a memory IC (See Fig. 18 and semiconductor chip 11c) and an RF-IC (See Fig. 18 and semiconductor chip 11b), said base-band IC and memory IC being mounted on the first side of said multi-layered substrate, and said RF-IC being mounted on the second side of said multi-

layered substrate (See Abstract, col. 3 lines 4-33, col. 7-8 lines 63-3, and col. 11 lines 24-33); an RF passive component incorporated in said multi-layered substrate; and a wiring pattern incorporated in said multi-layered substrate, said wiring pattern interconnecting said base-band IC and said memory IC (See col. 14-15 lines 66-12, col. 15 lines 42-48, col. 16 lines 36-44, and col. 19-20 lines 64-8); and a shielding ground electrode pattern (See Fig. 16-17, ground pattern 36 and Fig. 36A-36B, grounding electrode 106) interposed between the first side of said multi-layered substrate on which said base-band IC and said memory IC are mounted and the second side of said multi-layered substrate on which said RF-IC is mounted (See col. 10-11 lines 66-19 and col. 18 lines 58-63).

4. In regards to claims 2 and 10, Yoshihara discloses an RF module, further comprising an antenna incorporated in said multi-layered substrate (See Fig. 25, transmitter antenna 12, and receiver antenna 13).

5. In regards to claim 3, 4, and 8, Yoshihara discloses an RF module, wherein at least one of said base-band IC, said memory IC, and said RF-IC is a bare-chip (See col. 11 lines 24-33).

6. In regards to claim 7, Yoshihara discloses an RF module, further comprising at least one trimming electrode pattern (See Fig. 16-17, ground pattern 36 and Fig. 36A-36B, grounding electrode 106) disposed on a surface of said multi-layered substrate and arranged to enable adjustment of frequency characteristics of the RF module (See Abstract, col. 10-11 lines 66-19, and col. 18 lines 58-63).

Response to Arguments

7. Applicant's arguments with respect to claims 1-4 and 6-10 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Koyama (US 6,396,144) teaches a mounting structure of a semiconductor device, and communication apparatus using the same. Ueda et al (US 5,838,412) teach a liquid crystal display device assembled by flip chip technology comprising a folded multi-layered flexible driving circuit substrate.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thjuan P. Knowlin whose telephone number is (571) 272-7486. The examiner can normally be reached on Mon-Fri 8:30-5:00pm.

10. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wing Chan can be reached on (571) 272-7493. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2614

11. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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